IN THE CLAIMS:

1. (currently amended) A polishing machine for a peripheral edge of a semiconductor wafer, said machine comprising:

a rotary mechanism for holding a semiconductor wafer while rotating it in a prescribed direction;

a rotary body which rotates relative to the semiconductor wafer while maintaining a prescribed gap from a periphery of said semiconductor wafer, having a rotary axis which is set in the same direction as the rotary axis of said semiconductor wafer;

a polishing solution channel for channeling the flow of polishing solution to said gap; and

a polishing solution supply portion for supplying the polishing solution to said polishing solution channel;

wherein said polishing solution is drawn into said gap between the peripheral edge of said semiconductor wafer and said rotary body to conduct non-contact polishing of the peripheral edge of said semiconductor wafer.

2. (currently amended) A polishing machine for a peripheral edge of a semiconductor wafer, said machine comprising:

a rotary mechanism for holding a semiconductor wafer while rotating it in a prescribed direction;

a rotary body which rotates relative to the semiconductor wafer while maintaining a prescribed gap from a periphery of said semiconductor wafer, having a rotary axis which is set in the same direction as the rotary axis of said semiconductor wafer;

a polishing solution tank for immersing said rotary mechanism and said rotary body in polishing solution; and

a polishing solution circulation portion for circulating the polishing solution in and out of said polishing solution tank;

wherein said polishing solution is drawn into said gap between the peripheral edge of said semiconductor wafer and said rotary body to conduct non-contact polishing of the peripheral edge of said semiconductor wafer.

3. (original) The polishing machine for a peripheral edge of a semiconductor wafer

according to claim 1, wherein said rotary mechanism holds a plurality of semiconductor wafers in a stacked state.

4. (original) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 1, wherein dynamic pressure generating grooves are formed on the peripheral surface of said rotary body facing the periphery of said semiconductor wafer.

5. (original) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 1, wherein a magnet is installed in said rotary body and a magnetic polishing solution is used as said polishing solution.

6. (original) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 1, wherein at least the peripheral surface of said rotary body facing the periphery of said semiconductor wafer is formed of an elastic material with a hardness in the range of 7 - 40 Hs.

7. (previously presented) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 2, wherein said rotary mechanism holds a plurality of semiconductor wafers in a stacked state.

8. (previously presented) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 2, wherein dynamic pressure generating grooves are formed on the peripheral surface of said rotary body facing the periphery of said semiconductor wafer.

9. (previously presented) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 2, wherein a magnet is installed in said rotary body and a magnetic polishing solution is used as said polishing solution.

10. (previously presented) The polishing machine for a peripheral edge of a semiconductor wafer according to claim 2, wherein at least the peripheral surface of said rotary body facing the periphery of said semiconductor wafer is formed of an elastic material with a hardness in the range of 7 - 40 Hs.